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REMARKS

Claims 1-24 are pending.

In the Office Action, the Examiner rejected claims 1, 4, 5, 9, and 11 under 35 U.S.C. § 102(b) as being anticipated by Thomas; rejected claims 1, 5, 8, and 22 under 35 U.S.C. § 102(e) as being anticipated by Zhou et al.; rejected claims 22-24 under 35 U.S.C. § 103(a) as being unpatentable over Pessolano et al.; rejected claims 2, 3, 6-8, 10, and 12-14 under 35 U.S.C. § 103(a) as being unpatentable over Thomas or Zhou et al.; and stated that claims 15-21 are allowed.

§ 102(b) over Thomas

Applicants respectfully traverse the § 102(b) rejection of claims 1, 4, 5, 9, and 11 over Thomas. Independent claim 1, as amended, requires a device including, *inter alia*, "a boiling structure formed of a first porous material; and a wick structure formed of a second porous material surrounding the boiling structure to bring the coolant to the boiling structure." Independent claim 9, as amended, requires a heat pipe including, *inter alia*, "a boiling structure formed of a porous material; and a wick formed of another porous material surrounding all sides of the boiling structure." Thomas fails to disclose all elements of the device and heat pipe in claims 1 and 9.

Page 3 of the Office Action reads the claimed boiling structure on heat transfer pillar 53, and reads the claimed wick on lid 21 (including top surface 57, fluid path bridge 63, and planar capillary fluid path 50) of Thomas.

Thomas contains no disclosure that any of pillar 53, lid 21, surface 57, bridge 63, or path 50 are formed of a "porous material," as required by claims 1 and 9 as amended. Instead, there is disclosure that these elements are not formed of a porous material. See the cross-hatching in Figs. 1 and 4; col. 6, lines 45 and 46; and col. 6, lines 58-60. Hence, Thomas fails to disclose all elements of claims 1 and 9 in their claimed relationship.

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The § 102(b) rejection of claims 1 and 9 over Thomas is thus improper, and should be withdrawn. Dependent claims 4, 5, and 11 are allowable over Thomas at least by virtue of their dependency from claims 1 and 9.

§ 102(e) over Zhou et al.

Applicants respectfully traverse the § 102(e) rejection of claims 1, 5, 8, and 22 over Zhou et al. The requirements of claim 1 as amended are listed above. Independent claim 22, as amended, requires a device including, *inter alia*, “a porous structure formed of a porous material; and a wick surrounding the porous structure to wet the porous structure with the coolant.” Zhou et al. fails to disclose all elements of the device in claims 1 and 22.

Page 3 of the Office Action reads the claimed boiling structure/porous structure on heat source 99, and reads the claimed wick structure/wick on wicking structure 118’ of Zhou et al.

First, as may be seen in Figs. 2A and 2B of Zhou et al., wicking structure 118’ just abuts a top surface of heat source 99. See also col. 6, lines 40–42 of Zhou et al., which discloses that “The heat exchanging interface 103 is preferably the interior bottom surface of the heat exchanger 100.” A wicking structure that shares only a single surface with a heat source does not reasonably “surround” it. Thus, Figs. 2A and 2B of Zhou et al. do not reasonably disclose “a wick structure . . . surrounding the boiling structure” as set forth in claim 1, or “a wick surrounding the porous structure” as set forth in claim 22.

Second, claim 22 requires that the wick functions “to wet the porous structure with the coolant.” Zhou et al. fails to disclose that the heat source 99 is “wet . . . with coolant” as required by claim 22.

Third, claim 1 requires that the claimed boiling structure be “formed of a first porous material,” and claim 22 requires that the claimed porous structure be “formed of a porous material.” There is no disclosure in Zhou et al. that heat source 99 is formed of a “porous material.” Hence, Zhou et al. fails to disclose all elements of claims 1 and 22 in their claimed relationship.

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The § 102(e) rejection of claims 1 and 22 over Zhou et al. is thus improper, and should be withdrawn. Dependent claims 5 and 8 are allowable over Zhou et al. at least by virtue of their dependency from claim 1.

§ 103(a) over Pessolano et al.

Applicants respectfully traverse the § 103(a) rejection of claims 22-24 over Pessolano et al. The requirements of claim 22 as amended are listed above. A *prima facie* case of obviousness cannot be established, because Pessolano et al. fails to teach or suggest all elements of the device in claim 22.

Page 4 of the Office Action reads the claimed porous structure on collector 37 in Fig. 3 of Pessolano et al.

Pessolano et al. fails to teach or suggest that collector 37 is “formed of a porous material” as required by claim 22 as amended. The single mention of the element at col. 5, lines 43-46, provides “A collector 37 serves to collect vapor bubbles which provide the means to pump working fluid via the percolation channel to the upper extremities of the wick structure.” Also, the side view in Fig. 3 suggests a solid collector 37. Thus, a *prima facie* case of obviousness cannot be established for claims 22-24, because Pessolano et al. fails to teach or suggest all elements of the claims as amended.

§ 103(a) over Thomas or Zhou et al.

Claims 2, 3, 6-8, 10, and 12-14 are also allowable over Thomas and Zhou et al. at least by virtue of their dependency from claims 1 and 9 as explained above. Neither Thomas nor Zhou et al. teaches or suggests a boiling structure and a wick structure formed of a “porous material” as set forth in the claims as amended. Thus, a *prima facie* case of obviousness cannot be established for claims 2, 3, 6-8, 10, and 12-14.

As stated in the previous response, Applicants do not acquiesce to any allegation of what “has been held . . . involves only routine skill in the art,” specifically those appearing on pages 4 and 5 of the Office Action. Because the previous traversal of this unsupported allegation was not

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answered, Applicants repeat such traversal by reference to the previous response filed November 12, 2004.

Reconsideration and allowance of pending claims 1-24 is respectfully requested.

In the event that any outstanding matters remain in this application, Applicants request that the Examiner contact Alan Pedersen-Giles, attorney for Applicants, at the number below to discuss such matters.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0221 and please credit any excess fees to such deposit account.

Respectfully submitted,

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